PEER-LED TEAM LEARNING
LEADER TRAINING

Chemical Speed Dating as a Peer-Led Team Learning Activity

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Introduction

Although workshops improve student comprehension of complex issues, some students require a more kinesthetic approach to problem solving. *Chemical Speed Dating* is loosely based on the activity used for many individuals to get to know one another in a short period of time. Chemical Speed Dating provides chemistry students with 'nametags' showing some kind of chemical information such as names of molecules, partial chemical reactions, or chemical properties. The students are asked to rotate around the room finding other students with the appropriate 'missing' or 'matching' chemical information. For example, when studying intermolecular forces, students would be asked to find molecules that interact with their molecule and identify the type of interaction. Chemical Speed Dating is a dynamic, novel method to recognize general trends and relationships in chemistry as well as to learn chemical principles by means other than memorization.

Setup and Procedure

- All students are provided with nametags featuring chemical properties, molecules or steps to solving a problem.
- Each student is then required to move around the room and interact with other students, trying to complete, correctly place or identify the relationship between their nametag and those of other students.
- To exemplify: when studying intermolecular forces, each student nametag may feature a different molecular structure.
- Students are asked to find another molecule they might interact with by a specific force, or to identify the force generated when their molecule comes near the molecule of another student's, e.g. to distinguish whether the force involves dipoles, induced dipoles, London dispersion forces or hydrogen-bonding.
- With this activity, students develop proficiency in chemical concepts, a rapport with other team mates and critical thinking skills.

Background

'Plus Two' Peer-Led Team Learning (PLTL) at the University of Texas at El Paso is a revolutionary approach to instruction, blending informative, traditional lecture with innovative, constructivist 'free style' workshops. Plus Two PLTL received the Texas Higher Education Coordinating Board STAR Award in 2006 and replaces one hour of lecture a week with two hours of small learning community workshop overseen by a Peer Leader. Students explore concepts through wet laboratory chemistry activities (Explorations) and intimate, hands-on approaches to problem solving and skill development. Success in general chemistry at UTEP has dramatically improved (53% pass rate to over 70%) since implementation of Plus Two PLTL in fall 2000.

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